

In the Claims:

1. (Previously Presented) An improved ultrasonic imaging system constructed to facilitate imaging of at least a portion of a jaw, the system comprising:

- (a) a probe comprising at least one curved wand whereupon each is mounted a curved array of ultrasonic transducers, wherein at least one said curved wand is designed and constructed to be insertable into a mouth of a patient;
- (b) a position locator module designed and constructed to be capable of defining a location of said probe in six degrees of freedom and transmitting said definition to a central processing unit; and
- (c) said central processing unit capable of;
 - (i) receiving from said probe digital data from each of said ultrasonic transducers in each said curved array;
 - (ii) further receiving from said position locator a location of said probe; and
 - (iii) transforming said digital data into an image of said at least a portion of a jaw.

2. (Original) The system of claim 1 wherein said image is a three dimensional image.

3. (Previously Presented) The system of claim 1, wherein said probe is a mandibular probe designed and constructed to facilitate imaging of at least a portion of a lower jaw and includes:

- (i) a first said curved array of ultrasonic transducers mounted upon a first said curved wand, said first curved array of ultrasonic transducers positionable distal to the lower jaw and outside of said mouth;
- (ii) a second said curved array of ultrasonic transducers, said second curved array of transducers mounted upon a second said curved wand, said second curved array of ultrasonic transducers positionable proximal to the lower jaw and inside of said mouth; and

- (iii) at least one connective member, said connective member designed and constructed to connect said first and second curved wands one to another and to allow relative positioning thereof; wherein said connective member includes an assembly designed and constructed to attach said first and second curved wands and facilitate translational motion of said curved wands with respect to one another.

4. (Previously Presented) The system of claim 1, wherein said probe is designed and constructed to facilitate imaging of at least a portion of an upper jaw and includes a single said curved array of ultrasonic transducers mounted upon a said curved wand, wherein said curved wand is designed and constructed to be insertable into said mouth of said patient.

5. (Original) The system of claim 1 wherein said position locator module includes at least one first position sensor located on said probe and at least one second position sensor located on head of said patient.

6. (Previously Presented) The system of claim 1 wherein said position locator module includes a first mechanical positioning mechanism designed and constructed to position said probe and a retention means designed and constructed to engage and retain head of said patient in a known position.

7. (Previously Presented) The system of claim 1, further including an ultrasonic coupling cushion, said cushion comprising an elastic container capable of retaining a coupling medium wherein said elastic container is designed and constructed to be insertable in said mouth of said patient.

8. (Previously Presented) A method of producing an ultrasonic image of at least a portion of a jaw, the method comprising:

- (a) providing a probe comprising at least one curved wand whereupon each is mounted a curved array of ultrasonic transducers, wherein at least one said curved wand is designed and constructed to be insertable into a mouth of a patient.

- (b) defining a location of said probe in six degrees of freedom by means of a position locator;
- (c) communicating said location to a central processing unit;
- (d) transmitting an ultrasonic signal from at least one of said transducers and receiving at least a portion of said ultrasonic signal at least one of said transducers; and
- (e) employing a central processing unit to;
 - (i) receive a set of digital data pertaining to said transmitting and receiving performed by said transducers in each said curved array of said probe;
 - (ii) further receive from said position locator a location of said probe; and
 - (iii) transform said digital data into an image of said at least a portion of the jaw.

9. (Original) The method of claim 8, wherein said image is a three dimensional image.

10. (Previously Presented) The method of claim 8, wherein providing a probe includes providing a mandibular probe designed and constructed to facilitate imaging of at least a portion of a lower jaw and includes:

- (i) providing a first said curved array of ultrasonic transducers mounted upon a first said curved wand, said first curved array of ultrasonic transducers positionable distal to the lower jaw and outside of said mouth;
- (ii) providing a second said curved array of ultrasonic transducers, said second curved array of transducers mounted upon a second said curved wand, said second curved array of ultrasonic transducers positionable proximal to the lower jaw and inside of said mouth;
- (iii) providing at least one connective member, said connective member designed and constructed to connect said first and second curved arrays one to another and to allow relative positioning thereof; and wherein said connective member includes an assembly designed and constructed to attach said first and second curved wands and

facilitate translational motion of said curved wands with respect to one another.

11. (Previously Presented) The method of claim 8, wherein providing a probe includes providing a maxillary probe designed and constructed to facilitate imaging of at least a portion of an upper jaw and includes a single said curved array of ultrasonic transducers mounted upon a said curved wand, wherein said curved wand is designed and constructed to be insertable into said mouth of said patient.

12 - 15. (Cancelled).